

Submitted to DLI  
RWCBS  
9/18/86

QUARTERLY SAMPLING REPORT  
SOUTHERN CALIFORNIA CHEMICAL CO., INC.  
SANTA FE SPRINGS, CALIFORNIA

08-07-86

August, 1986

Prepared by:

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**J. H. KLEINFELDER & ASSOCIATES**  
GEOTECHNICAL CONSULTANTS • MATERIALS TESTING  
LAND AND WATER RESOURCES



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SO. CALIF. CHEM. CO.

J. H. KLEINFELDER & ASSOCIATES

GEOTECHNICAL CONSULTANTS • MATERIALS TESTING  
LAND & WATER RESOURCES

VICTORIA CORNER BUSINESS PARK  
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(213) 638-9344

August 7, 1986

Q-1014-3

California Regional Water Quality Control Board  
Los Angeles Region  
107 South Broadway, Room 4027  
Los Angeles, CA 90012-4596

Attention: Mr. Hank Yacoub

Subject: Southern California Chemical Co., Inc.  
Quarterly Sampling - July, 1986

Dear Mr. Yacoub:

Attached to this letter is our quarterly sampling report of the Southern California Chemical Co., Inc. Santa Fe Springs facility. The report presents a summary of the laboratory testing and sampling protocol used during sampling and analysis of the twelve groundwater wells.

We trust the information presented in the report meets your needs at this time. Should you have any questions, please feel free to contact us at your convenience.

Very truly yours,

J.H. KLEINFELDER & ASSOCIATES

*Kenneth L. Durand*  
Kenneth L. Durand  
Hydrogeologist

*Randolph C. Harris*  
Randolph C. Harris  
Senior Hydrogeologist, R.G. #3708

KLD:RCH:kl

cc: Tere King  
John Leo  
Mark Vest  
William Wilson



## 1.0 INTRODUCTION

Southern California Chemical Co., Inc., as part of its environmental assessment of the Santa Fe Spring facility has undertaken quarterly sampling of the on-site groundwater monitoring wells. The intent of this sampling program is to provide a long term data base of the site and to detect any changes in the chromium/cadmium plume that is located in the vicinity of MW 4.

A total of twelve monitoring wells are sampled as part of this program (Plate 1). Eleven of the twelve wells sample from the uppermost portion of the first aquifer encountered beneath the site. One well (MW 4A) samples from the bottommost portion of this same aquifer.

This report presents the data obtained from the second quarterly sampling (July 1986) interval along with all previous sampling. Representatives from the Regional Water Quality Control Board were present and were provided split samples, when requested for all sampling periods to date. The original laboratory reports and chain of custody records of the July 1986 sampling are included in the Appendices. The third quarterly sampling is scheduled for September 1986 with a report to the Regional Water Quality Control Board to follow in October 1986.

## 2.0 MONITORING WELL SAMPLING PROTOCOL

Sampling occurred on July 7, 8, 9 and 10, 1986, and was performed

by a J.H. Kleinfelder & Associates Environmental Technician using the Mark I groundwater sampling vehicle. Athar Khan of the Regional Water Quality Control Board was present on July 9 and 10, 1986 to observe sampling and to collect split samples.

All wells were measured for static water level prior to sampling. The wells were then purged and sampled using an air-activated, submersible pump (bladder pump) constructed of stainless steel and silicon. To minimize the potential for cross-contamination, the pump and teflon sampler line were thoroughly decontaminated before sampling and between wells, as described in Appendix A.

### 3.0 LABORATORY TESTING

Laboratory testing for the July 1986 quarterly sampling consisted of analyzing 12 well samples and 7 quality control samples. Monitoring well samples were analyzed for the following.

<u>Compound</u>	<u>Method</u>
Hexavalent Chromium	Standard Methods 312B
Total Chromium	EPA Method 218.2
Nitrate Nitrogen	EPA Method 353.2
Chloride	EPA Method 325.3
Copper	EPA Method 220.1
Zinc	EPA Method 289.1
Cadmium	EPA Method 218.2
TOX	EPA Method 9020
TOC	EPA Method 415.1
pH	EPA Method 150.1
Specific Conductance	EPA Method 120.1
Purgeable Organics	EPA Method 624

Quality control samples were collected to verify that cross-contamination between wells was not occurring during sampling. Samples were collected prior to the first well and between every


second well. Q.C. samples were analyzed for purgeable organics by EPA Method 624. This parameter was chosen because background levels of TCE are present in every well and the analysis provides a very low (ppb) detection range. This provides for a very good indication of possible cross-contamination.

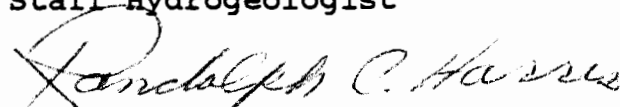
Testing was performed by Brown and Caldwell Laboratories of Pasadena, California. The results of the testing are summarized and presented in Tables A through L. Individual test results are included in Appendix B with chain of custody records in Appendix C.

The results of this quarterly sampling are submitted for the review and records of the Regional Water Quality Control Board. Please direct any pertinent review comments to our attention at your earliest convenience.

Sincerely,

J.H. KLEINFELDER & ASSOCIATES

  
Kenneth L. Durand  
Staff Hydrogeologist

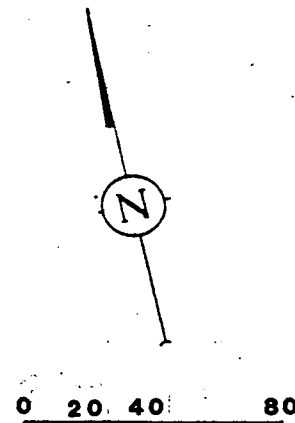
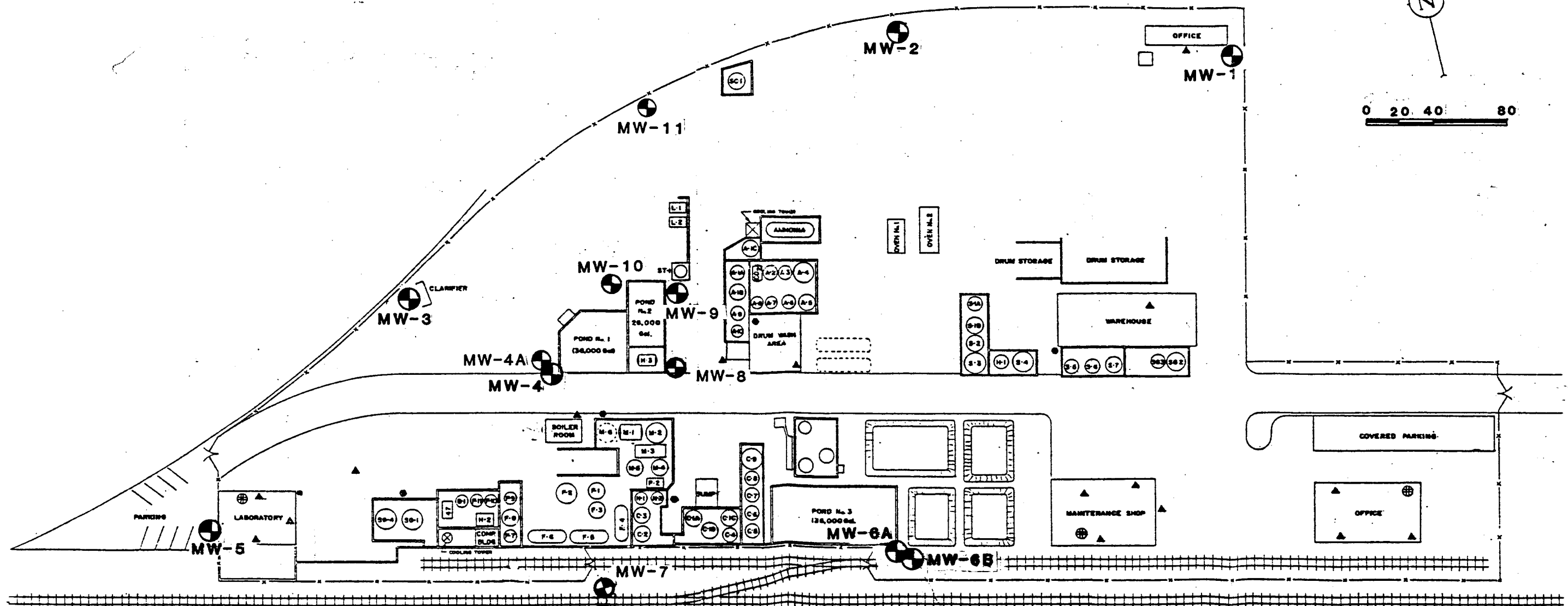
  
Randolph C. Harris  
Senior Hydrogeologist, R.G. #3708

KLD:RCH:kl



# EXPLANATION

⊕ MW-11 MONITORING WELL



J.H. KLEINFELDER & ASSOCIATES  
GEOTECHNICAL CONSULTANTS • MATERIALS TESTING



SOUTHERN CALIFORNIA CHEMICAL  
SANTA FE SPRINGS, CA.

PROJECT NO. Q 1014-2

PLATE  
1

# TABLE A

SOUTHERN CALIFORNIA CHEMICAL CO., INC.

WATER QUALITY DATA

MONITORING WELL #1

COMPOUND	DATE SAMPLED				
	2-85/ 3-85	7-85/ 8-85	3-85	5-86	7-86
E.P.A. Indicator Parameters (CFR 40 265.92)					
PH (Units)	7.3		7.1		7.2
TOC (mg/l)	3.7		19		35
TOX (mg/l)	ND.05		ND.08		ND.08
SP. COND. (umhos/cm)	2300		3400		1650

Site Specific Indicator Parameters					
CHROMIUM (TOTAL) (mg/l)	ND.0005		ND.03		ND.03
CHROMIUM (HEX) (mg/l)	ND.05		ND.02		ND.02
CADMIUM (mg/l)	ND.0002		ND.009		ND.02
COPPER (mg/l)	ND.08		ND.02		ND.01
ZINC (mg/l)	ND.019		0.18		0.04
CHLORIDE (mg/l)	330		300		650
NITRATE as N (mg/l)	7.0		3.7		4.1
NITRATE as NO <sub>3</sub> (mg/l)	31		17		18

NOTE: ND<sub>1</sub> = Compound was not detected at 1 mg/l.

Organic Compounds (E.P.A. Method 624)					
1, 1-DICHLOROETHANE (ug/l)		ND <sub>1</sub>		ND <sub>1</sub>	
1, 1-DICHLOROETHYLENE (ug/l)		ND <sub>1</sub>		ND <sub>1</sub>	
1, 2-DICHLOROETHANE (ug/l)		ND <sub>1</sub>		ND <sub>1</sub>	
BENZENE (ug/l)		ND <sub>1</sub>		ND <sub>1</sub>	
CARBON TETRACHLORIDE (ug/l)		ND <sub>1</sub>		ND <sub>1</sub>	
CHLOROFORM (ug/l)		ND <sub>1</sub>		ND <sub>1</sub>	
ETHYL BENZENE (ug/l)		ND <sub>1</sub>		ND <sub>1</sub>	
TRICHLOROETHYLENE (ug/l)		16		16	
TOLUENE (ug/l)		ND <sub>1</sub>		ND <sub>1</sub>	
XYLENE (ug/l)		ND <sub>1</sub>		ND <sub>1</sub>	
METHYLENE CHLORIDE (ug/l)		ND <sub>1</sub>		ND <sub>1</sub>	

NOTE: ND<sub>1</sub> = Compound was not detected at 1 ug/l.

# TABLE B

SOUTHERN CALIFORNIA CHEMICAL CO., INC.

WATER QUALITY DATA

MONITORING WELL #2

COMPOUND	DATE SAMPLED				
	2-85/ 3-85	7-85/ 8-85	3-85	5-86	7-86
E.P.A. Indicator Parameters (CFR 40 265.92)					
PH (Units)	7.0		7.4		7.7
TOC (mg/l)	34		4.8		ND 3
TOX (mg/l)	ND.05		ND.08		ND.08
SP. COND. (umhos/cm)	2300		1900		1800

Site Specific Indicator Parameters					
CHROMIUM (TOTAL) (mg/l)	ND.0005	ND.033	ND.03		ND.03
CHROMIUM (HEX) (mg/l)	ND.05	ND.033	ND.02		ND.02
CADMIUM (mg/l)	ND.0002		ND.009		ND.01
COPPER (mg/l)	ND.08		ND.02		ND.02
ZINC (mg/l)	ND.019		ND.03		ND.04
CHLORIDE (mg/l)	270		180		220
NITRATE as N (mg/l)	2.1		5.8		5.4
NITRATE as NO <sub>3</sub> (mg/l)	9.1		26		24

NOTE: ND<sub>1</sub> = Compound was not detected at 1 mg/l.

Organic Compounds (E.P.A. Method 624)				
1, 1-DICHLOROETHANE (ug/l)	4	3		ND <sub>1</sub>
1, 1-DICHLOROETHYLENE (ug/l)	3	ND <sub>1</sub>		ND <sub>1</sub>
1, 2-DICHLOROETHANE (ug/l)	ND <sub>1</sub>	ND <sub>1</sub>		3
BENZENE (ug/l)	ND <sub>1</sub>	ND <sub>1</sub>		ND <sub>1</sub>
CARBON TETRACHLORIDE (ug/l)	ND <sub>1</sub>	ND <sub>1</sub>		ND <sub>1</sub>
CHLOROFORM (ug/l)	ND <sub>1</sub>	ND <sub>1</sub>		ND <sub>1</sub>
ETHYL BENZENE (ug/l)	ND <sub>1</sub>	ND <sub>1</sub>		3
TRICHLOROETHYLENE (ug/l)	21	22		12
TOLUENE (ug/l)	ND <sub>1</sub>	ND <sub>1</sub>		3
XYLENE (ug/l)	ND <sub>1</sub>	ND <sub>1</sub>		2
METHYLENE CHLORIDE (ug/l)	ND <sub>1</sub>	ND <sub>1</sub>		ND <sub>1</sub>

NOTE: ND<sub>1</sub> = Compound was not detected at 1 ug/l.

# TABLE C

SOUTHERN CALIFORNIA CHEMICAL CO., INC.

WATER QUALITY DATA

MONITORING WELL #3

COMPOUND	DATE SAMPLED				
	2-85/ 3-85	7-85/ 8-85	3-86	5-86	7-86
E.P.A. Indicator Parameters (CFR 40 265.92)					
PH (Units)	7.4		7.0		7.2
TOC (mg/l)	16		190		44
TOX (mg/l)	0.17		ND.08		.18
SP. COND. (umhos/cm)	1700		1500		2200

Site Specific Indicator Parameters					
CHROMIUM (TOTAL) (mg/l)	ND.0005	ND.033	ND.03		ND.03
CHROMIUM (HEX) (mg/l)	ND.05	ND.033	ND.02		ND.02
CADMIUM (mg/l)	ND.0002	ND.011	ND.009		ND.01
COPPER (mg/l)	ND.08		ND.02		ND.02
ZINC (mg/l)	ND.019		0.26		ND.04
CHLORIDE (mg/l)	170		76		400
NITRATE as N (mg/l)	3.0		ND <sub>1</sub>		6.5
NITRATE as NO <sub>3</sub> (mg/l)	13		ND 4.4		29

NOTE: ND<sub>1</sub> = Compound was not detected at 1 mg/l.

Organic Compounds (E.P.A. Method 624)					
1, 1-DICHLOROETHANE (ug/l)	6	ND50	5		4
1, 1-DICHLOROETHYLENE (ug/l)	14	ND50	11		7
1, 2-DICHLOROETHANE (ug/l)	ND <sub>1</sub>	ND50	9		6
BENZENE (ug/l)	9	ND50	3		ND <sub>1</sub>
CARBON TETRACHLORIDE (ug/l)	73	ND50	78		110
CHLOROFORM (ug/l)	46	ND50	36		97
ETHYL BENZENE (ug/l)	ND <sub>1</sub>	95000	1100		ND <sub>1</sub>
TRICHLOROETHYLENE (ug/l)	320	ND50	160		170
TOLUENE (ug/l)	2	15000	11		ND <sub>1</sub>
XYLENE (ug/l)	ND <sub>1</sub>	20000	2000		ND <sub>1</sub>
METHYLENE CHLORIDE (ug/l)	ND <sub>1</sub>	ND50	ND <sub>1</sub>		ND <sub>1</sub>

NOTE: ND<sub>1</sub> = Compound was not detected at 1 ug/l.

# TABLE D

SOUTHERN CALIFORNIA CHEMICAL CO., INC.

WATER QUALITY DATA

MONITORING WELL #4

COMPOUND	DATE SAMPLED				
	2-85/ 3-85	7-85/ 8-85	3-86	5-86	7-86
E.P.A. Indicator Parameters (CFR 40 265.92)					
PH (Units)	6.3		7.1		7.1
TOC (mg/l)	36		26		110
TOX (mg/l)	ND.05		.26		.19
SP. COND. (umhos/cm)	6400		3600		3500

Site Specific Indicator Parameters					
CHROMIUM (TOTAL) (mg/l)	500	550	61		120
CHROMIUM (HEX) (mg/l)	500	500			120
CADMIUM (mg/l)	0.78	0.92	0.035		0.04
COPPER (mg/l)	ND.08		ND.02		ND.02
ZINC (mg/l)	0.06		ND.03		ND.04
CHLORIDE (mg/l)	2300		1100		770
NITRATE as N (mg/l)	18	12	ND <sub>13</sub>		0.5
NITRATE as NO <sub>3</sub> (mg/l)	81	55	ND <sub>55</sub>		2.4

NOTE: ND<sub>1</sub> = Compound was not detected at 1 mg/l.

Organic Compounds (E.P.A. Method 624)					
1, 1-DICHLOROETHANE (ug/l)	100	100	42		57
1, 1-DICHLOROETHYLENE (ug/l)	100		42	34	41
1, 2-DICHLOROETHANE (ug/l)	ND <sub>50</sub>		17	34	61
BENZENE (ug/l)	ND <sub>50</sub>		16	9	ND <sub>1</sub>
CARBON TETRACHLORIDE (ug/l)	ND <sub>50</sub>		ND <sub>1</sub>	ND <sub>1</sub>	ND <sub>1</sub>
CHLOROFORM (ug/l)	ND <sub>50</sub>		7	3	8
ETHYL BENZENE (ug/l)	3000		36	50	1100
TRICHLOROETHYLENE (ug/l)	550		140	170	200
TOLUENE (ug/l)	8300		130	25	330
XYLENE (ug/l)	10000		100	30	300
METHYLENE CHLORIDE (ug/l)	100		12	ND <sub>1</sub>	17

NOTE: ND<sub>1</sub> = Compound was not detected at 1 ug/l.

# TABLE E

SOUTHERN CALIFORNIA CHEMICAL CO., INC.

WATER QUALITY DATA

MONITORING WELL #4A

COMPOUND	DATE SAMPLED				
	2-85/ 3-85	7-85/ 8-85	3-86	5-86	7-86
E.P.A. Indicator Parameters (CFR 40 265.92)					
PH (Units)		6.8	7.5		7.6
TOC (mg/l)		40	8.3		ND <sub>3</sub>
TOX (mg/l)		ND.05	ND.08		ND.08
SP. COND. (umhos/cm)		1500	1500		850

Site Specific Indicator Parameters					
CHROMIUM (TOTAL) (mg/l)		ND.03	ND.03		ND.03
CHROMIUM (HEX) (mg/l)		ND.5			ND.02
CADMIUM (mg/l)		ND.01	ND.01		ND.01
COPPER (mg/l)			ND.02		ND.02
ZINC (mg/l)			ND.03		ND.04
CHLORIDE (mg/l)			100		110
NITRATE as N (mg/l)		4.5	7.5		6.1
NITRATE as NO <sub>3</sub> (mg/l)		20	33		27

NOTE: ND<sub>1</sub> = Compound was not detected at 1 mg/l.

Organic Compounds (E.P.A. Method 624)					
1, 1-DICHLOROETHANE (ug/l)			13		11
1, 1-DICHLOROETHYLENE (ug/l)			1		2
1, 2-DICHLOROETHANE (ug/l)			ND <sub>1</sub>		ND <sub>1</sub>
BENZENE (ug/l)			8		ND <sub>1</sub>
CARBON TETRACHLORIDE (ug/l)			ND <sub>1</sub>		ND <sub>1</sub>
CHLOROFORM (ug/l)			ND <sub>1</sub>		ND <sub>1</sub>
ETHYL BENZENE (ug/l)			ND <sub>1</sub>		ND <sub>1</sub>
TRICHLOROETHYLENE (ug/l)			8		7
TOLUENE (ug/l)			ND <sub>1</sub>		ND <sub>1</sub>
XYLENE (ug/l)			ND <sub>1</sub>		ND <sub>1</sub>
METHYLENE CHLORIDE (ug/l)			ND <sub>1</sub>		ND <sub>1</sub>

NOTE: ND<sub>1</sub> = Compound was not detected at 1 ug/l.

# TABLE F

SOUTHERN CALIFORNIA CHEMICAL CO., INC.

WATER QUALITY DATA

MONITORING WELL #5

COMPOUND	DATE SAMPLED				
	2-85/ 3-85	7-85/ 8-85	3-86	5-86	7-86
E.P.A. Indicator Parameters (CFR 40 265.92)					
PH (Units)	7.3		7.4		7.3
TOC (mg/l)	ND <sub>3</sub>		4.8		5
TOX (mg/l)	.19		.16		.65
SP. COND. (umhos/cm)	1700		1200		1400

Site Specific Indicator Parameters					
CHROMIUM (TOTAL) (mg/l)	ND.0005		ND.03		ND.03
CHROMIUM (HEX) (mg/l)	ND.05		ND.02		ND.02
CADMIUM (mg/l)	ND.0002		ND.009		ND.01
COPPER (mg/l)	ND.08		ND.02		ND.02
ZINC (mg/l)	ND.0019		0.18		ND.04
CHLORIDE (mg/l)	2.0		66		79
NITRATE as N (mg/l)	0.42		8.8		12
NITRATE as NO <sub>3</sub> (mg/l)	1.9		39		55

NOTE: ND<sub>1</sub> = Compound was not detected at 1 mg/l.

Organic Compounds (E.P.A. Method 624)					
1, 1-DICHLOROETHANE (ug/l)	ND <sub>1</sub>	ND <sub>1</sub>			2
1, 1-DICHLOROETHYLENE (ug/l)	ND <sub>1</sub>	ND <sub>1</sub>			3
1, 2-DICHLOROETHANE (ug/l)	ND <sub>1</sub>	ND <sub>1</sub>			ND <sub>1</sub>
BENZENE (ug/l)	5	ND <sub>1</sub>			ND <sub>1</sub>
CARBON TETRACHLORIDE (ug/l)	3	11			45.5
CHLOROFORM (ug/l)	2	10			14.5
ETHYL BENZENE (ug/l)	ND <sub>1</sub>	ND <sub>1</sub>			ND <sub>1</sub>
TRICHLOROETHYLENE (ug/l)	10	24			64
TOLUENE (ug/l)	1	ND <sub>1</sub>			ND <sub>1</sub>
XYLENE (ug/l)	ND <sub>1</sub>	ND <sub>1</sub>			ND <sub>1</sub>
METHYLENE CHLORIDE (ug/l)	ND <sub>1</sub>	ND <sub>1</sub>			ND <sub>1</sub>

NOTE: ND<sub>1</sub> = Compound was not detected at 1 ug/l.

# TABLE G

SOUTHERN CALIFORNIA CHEMICAL CO., INC.

WATER QUALITY DATA

MONITORING WELL #6B

COMPOUND	DATE SAMPLED				
	2-85/ 3-85	7-85/ 8-85	3-86	5-86	7-86
E.P.A. Indicator Parameters (CFR 40 265.92)					
PH (Units)	7.6		7.4		7.5
TOC (mg/l)	ND <sub>3</sub>		6.5		ND <sub>3</sub>
TOX (mg/l)	0.10		ND.08		ND.08
SP. COND. (umhos/cm)	1400		1300		1400

Site Specific Indicator Parameters					
CHROMIUM (TOTAL) (mg/l)	0.0038		ND.03		ND.03
CHROMIUM (HEX) (mg/l)	ND.05		ND.02		ND.02
CADMIUM (mg/l)	ND.0002		ND.009		ND.01
COPPER (mg/l)	ND.08		ND.02		ND.02
ZINC (mg/l)	ND.03		ND.03		ND.04
CHLORIDE (mg/l)	79		220		82
NITRATE as N (mg/l)	6.3		8.8		7.0
NITRATE as NO <sub>3</sub> (mg/l)	28		39		31

NOTE: ND<sub>1</sub> = Compound was not detected at 1 mg/l.

Organic Compounds (E.P.A. Method 624)					
1, 1-DICHLOROETHANE (ug/l)		ND <sub>1</sub>		ND <sub>1</sub>	
1, 1-DICHLOROETHYLENE (ug/l)		ND <sub>1</sub>		ND <sub>1</sub>	
1, 2-DICHLOROETHANE (ug/l)		ND <sub>1</sub>		ND <sub>1</sub>	
BENZENE (ug/l)		ND <sub>1</sub>		ND <sub>1</sub>	
CARBON TETRACHLORIDE (ug/l)		ND <sub>1</sub>		ND <sub>1</sub>	
CHLOROFORM (ug/l)		ND <sub>1</sub>		ND <sub>1</sub>	
ETHYL BENZENE (ug/l)		ND <sub>1</sub>		ND <sub>1</sub>	
TRICHLOROETHYLENE (ug/l)		30		19	
TOLUENE (ug/l)		ND <sub>1</sub>		ND <sub>1</sub>	
XYLENE (ug/l)		ND <sub>1</sub>		ND <sub>1</sub>	
METHYLENE CHLORIDE (ug/l)		ND <sub>1</sub>		ND <sub>1</sub>	

NOTE: ND<sub>1</sub> = Compound was not detected at 1 ug/l.

# TABLE H

SOUTHERN CALIFORNIA CHEMICAL CO., INC.

WATER QUALITY DATA

MONITORING WELL #7

COMPOUND	DATE SAMPLED			
	2-85/ 3-85	7-85/ 8-85	3-86	5-86 7-86
E.P.A. Indicator Parameters (CFR 40 265.92)				
PH (Units)		6.3	7.3	7.4
TOC (mg/l)		260	6.5	5
TOX (mg/l)		0.081	ND.08	ND.08
SP. COND. (umhos/cm)		2700	1700	1900

Site Specific Indicator Parameters				
CHROMIUM (TOTAL) (mg/l)		ND.03	ND.03	ND.03
CHROMIUM (HEX) (mg/l)		ND.5	ND.02	ND.02
CADMIUM (mg/l)		ND.01	ND.009	ND.01
COPPER (mg/l)			ND.02	ND.02
ZINC (mg/l)			ND.03	ND.04
CHLORIDE (mg/l)		380	190	280
NITRATE as N (mg/l)		27	5.0	4.3
NITRATE as NO <sub>3</sub> (mg/l)		120	22	19

NOTE: ND<sub>1</sub> = Compound was not detected at 1 mg/l.

Organic Compounds (E.P.A. Method 624)				
1, 1-DICHLOROETHANE (ug/l)		2		8
1, 1-DICHLOROETHYLENE (ug/l)		ND <sub>1</sub>		2
1, 2-DICHLOROETHANE (ug/l)		ND <sub>1</sub>		ND <sub>1</sub>
BENZENE (ug/l)		64		ND <sub>1</sub>
CARBON TETRACHLORIDE (ug/l)		ND <sub>1</sub>		ND <sub>1</sub>
CHLOROFORM (ug/l)		ND <sub>1</sub>		ND <sub>1</sub>
ETHYL BENZENE (ug/l)		ND <sub>1</sub>		4
TRICHLOROETHYLENE (ug/l)		29		67
TOLUENE (ug/l)		2		5
XYLENE (ug/l)		ND <sub>1</sub>		4
METHYLENE CHLORIDE (ug/l)		ND <sub>1</sub>		ND <sub>1</sub>

NOTE: ND<sub>1</sub> = Compound was not detected at 1 ug/l.

# TABLE I

SOUTHERN CALIFORNIA CHEMICAL CO., INC.

WATER QUALITY DATA

MONITORING WELL #8

COMPOUND	DATE SAMPLED				
	2-85/ 3-85	7-85/ 8-85	3-86	5-86	7-86
E.P.A. Indicator Parameters (CFR 40 265.92)					
PH (Units)		6.6	7.5		7.4
TOC (mg/l)		99	7		8
TOX (mg/l)		0.44	.09		ND.08
SP. COND. (umhos/cm)		2800	1500		1700

Site Specific Indicator Parameters					
CHROMIUM (TOTAL) (mg/l)		ND.03	ND.03		ND.03
CHROMIUM (HEX) (mg/l)		ND.05	ND.02		ND.02
CADMIUM (mg/l)		ND.01	ND.009		ND.01
COPPER (mg/l)			ND.02		ND.02
ZINC (mg/l)			ND.03		ND.04
CHLORIDE (mg/l)			530		170
NITRATE as N (mg/l)		1.3	4.2		3.2
NITRATE as NO <sub>3</sub> (mg/l)		5.8	18		14

NOTE: ND<sub>1</sub> = Compound was not detected at 1 mg/l.

Organic Compounds (E.P.A. Method 624)					
1, 1-DICHLOROETHANE (ug/l)			41		76
1, 1-DICHLOROETHYLENE (ug/l)			3		8
1, 2-DICHLOROETHANE (ug/l)			1		14
BENZENE (ug/l)			ND <sub>1</sub>		ND <sub>1</sub>
CARBON TETRACHLORIDE (ug/l)			ND <sub>1</sub>		ND <sub>1</sub>
CHLOROFORM (ug/l)			ND <sub>1</sub>		2
ETHYL BENZENE (ug/l)			ND <sub>1</sub>		2
TRICHLOROETHYLENE (ug/l)			19		28
TOLUENE (ug/l)			ND <sub>1</sub>		3
XYLENE (ug/l)			ND <sub>1</sub>		1
METHYLENE CHLORIDE (ug/l)			5		ND <sub>1</sub>

NOTE: ND<sub>1</sub> = Compound was not detected at 1 ug/l.

# TABLE J

SOUTHERN CALIFORNIA CHEMICAL CO., INC.

WATER QUALITY DATA

MONITORING WELL #9

COMPOUND	DATE SAMPLED				
	2-85/ 3-85	7-85/ 8-85	3-86	5-86	7-86
E.P.A. Indicator Parameters (CFR 40 265.92)					
PH (Units)		6.4	7.4		7.3
TOC (mg/l)		210	14		28
TOX (mg/l)		0.13	.26		.12
SP. COND. (umhos/cm)		2200	2800		2000

Site Specific Indicator Parameters					
CHROMIUM (TOTAL) (mg/l)		ND.03	ND.03		ND.03
CHROMIUM (HEX) (mg/l)		ND.5	ND.02		ND.02
CADMIUM (mg/l)		ND.01	ND.009		ND.01
COPPER (mg/l)			ND.02		ND.02
ZINC (mg/l)			ND.03		ND.04
CHLORIDE (mg/l)	300		530		250
NITRATE as N (mg/l)	1.4		8.8		3.2
NITRATE as NO <sub>3</sub> (mg/l)	6.3		39		14

NOTE: ND<sub>1</sub> = Compound was not detected at 1 mg/l.

Organic Compounds (E.P.A. Method 624)					
1, 1-DICHLOROETHANE (ug/l)		99		50	
1, 1-DICHLOROETHYLENE (ug/l)		18		18	
1, 2-DICHLOROETHANE (ug/l)		10		13	
BENZENE (ug/l)		ND <sub>1</sub>		ND <sub>1</sub>	
CARBON TETRACHLORIDE (ug/l)		ND <sub>1</sub>		ND <sub>1</sub>	
CHLOROFORM (ug/l)		20		4	
ETHYL BENZENE (ug/l)		ND <sub>1</sub>		ND <sub>1</sub>	
TRICHLOROETHYLENE (ug/l)		61		3	
TOLUENE (ug/l)		ND <sub>1</sub>		ND <sub>1</sub>	
XYLENE (ug/l)		ND <sub>1</sub>		ND <sub>1</sub>	
METHYLENE CHLORIDE (ug/l)		110		ND <sub>1</sub>	

NOTE: ND<sub>1</sub> = Compound was not detected at 1 ug/l.

# TABLE K

SOUTHERN CALIFORNIA CHEMICAL CO., INC.

WATER QUALITY DATA

MONITORING WELL #10

COMPOUND	DATE SAMPLED				
	2-85/ 3-85	7-85/ 8-85	3-86	5-86	7-86
E.P.A. Indicator Parameters (CFR 40 265.92)					
PH (Units)		6.8	7.8		7.6
TOC (mg/l)		440	10		130
TOX (mg/l)		0.17	ND.08		ND.08
SP. COND. (umhos/cm)		2100	1300		1600

Site Specific Indicator Parameters					
CHROMIUM (TOTAL) (mg/l)		ND.03	ND.03		ND.03
CHROMIUM (HEX) (mg/l)		ND.5			ND.02
CADMIUM (mg/l)		ND.01			ND.01
COPPER (mg/l)			ND.02		ND.02
ZINC (mg/l)			ND.03		ND.04
CHLORIDE (mg/l)			150		120
NITRATE as N (mg/l)		ND.1	ND.1		0.1
NITRATE as NO <sub>3</sub> (mg/l)		ND 4.4	ND4.4		0.6

NOTE: ND<sub>1</sub> = Compound was not detected at 1 mg/l.

Organic Compounds (E.P.A. Method 624)					
1, 1-DICHLOROETHANE (ug/l)		ND50	2		6
1, 1-DICHLOROETHYLENE (ug/l)		ND50	1		7
1, 2-DICHLOROETHANE (ug/l)		ND50	17		86
BENZENE (ug/l)		ND50	ND <sub>1</sub>		ND <sub>1</sub>
CARBON TETRACHLORIDE (ug/l)		ND50	ND <sub>1</sub>		ND <sub>1</sub>
CHLOROFORM (ug/l)		50	ND <sub>1</sub>		ND <sub>1</sub>
ETHYL BENZENE (ug/l)		6500	68		ND <sub>1</sub>
TRICHLOROETHYLENE (ug/l)		250	29		56
TOLUENE (ug/l)		17000	ND <sub>1</sub>		ND <sub>1</sub>
XYLENE (ug/l)		20000	ND <sub>1</sub>		70
METHYLENE CHLORIDE (ug/l)		100	ND <sub>1</sub>		ND <sub>1</sub>

NOTE: ND<sub>1</sub> = Compound was not detected at 1 ug/l.

# TABLE L

SOUTHERN CALIFORNIA CHEMICAL CO., INC.

WATER QUALITY DATA

MONITORING WELL # 11

COMPOUND	DATE SAMPLED				
	2-85/ 3-85	7-85/ 8-85	3-86	5-86	7-86
E.P.A. Indicator Parameters (CFR 40 265.92)					
PH (Units)		6.6	7.8		7.2
TOC (mg/l)		54	13		120
TOX (mg/l)		ND.05	0.1		ND.08
SP. COND. (umhos/cm)		1600	1600		1700

Site Specific Indicator Parameters					
CHROMIUM (TOTAL) (mg/l)		ND.03	ND.03		ND.03
CHROMIUM (HEX) (mg/l)		ND.5			ND.02
CADMIUM (mg/l)		ND.01	ND.01		ND.01
COPPER (mg/l)			ND.02		ND.02
ZINC (mg/l)			ND.03		ND.04
CHLORIDE (mg/l)	220		230		180
NITRATE as N (mg/l)	1.2		2.5		1.1
NITRATE as NO <sub>3</sub> (mg/l)	5.2		11		4.8

NOTE: ND<sub>1</sub> = Compound was not detected at 1 mg/l.

Organic Compounds (E.P.A. Method 624)					
1, 1-DICHLOROETHANE (ug/l)		10	4		10
1, 1-DICHLOROETHYLENE (ug/l)		8	2		5
1, 2-DICHLOROETHANE (ug/l)		8	31		17
BENZENE (ug/l)		ND <sub>1</sub>	3		ND <sub>1</sub>
CARBON TETRACHLORIDE (ug/l)		ND <sub>1</sub>	ND <sub>1</sub>		ND <sub>1</sub>
CHLOROFORM (ug/l)		3	3		10
ETHYL BENZENE (ug/l)		13	1800		2200
TRICHLOROETHYLENE (ug/l)		110	36		76
TOLUENE (ug/l)		ND <sub>1</sub>	5400		5200
XYLENE (ug/l)		20	4000		1500
METHYLENE CHLORIDE (ug/l)		ND <sub>1</sub>	ND <sub>1</sub>		ND <sub>1</sub>

NOTE: ND<sub>1</sub> = Compound was not detected at 1 ug/l.

J. H. KLEINFELDER & ASSOCIATES

APPENDIX A

MONITORING WELL SAMPLING PROTOCOL

II. Groundwater Sampling

A. Decontamination

The following procedure details the routine that is employed in decontamination of groundwater sampling equipment prior to sample collection:

1. Exterior surface of sampling tubes are decontaminated by steam-cleaning during withdrawal from very well.
2. Sample pump is disassembled and the used bladder removed.
3. All pump components are then steam-cleaned and rinsed in distilled water.
4. Pump is reassembled with a new bladder installed.
5. Teflon sampler lines are pressure washed with 5 to 10 gallons of clean, hot water through direct connection to steam-cleaner.
6. Five gallons of distilled water are then pumped through entire system.
7. Prior to sample collection, a minimum of five well volumes are purged from the well to permit collection of a representative groundwater sample from the aquifer penetrated.

B. Purge Volume Determination

The following procedure is followed to determine the appropriate purging volume prior to well sampling.

1. The depth-to-water is measured by a clean, electric water level indicator. Measurement datum is the top of fill ring or top of well protector.
2. Depth to the bottom of the well is measured by a clean tape and plump bob. If possible, this is compared to the well construction log to determine inconsistencies, i.e. damaged casing, sediment in casing, etc.

3. Water volume is calculated by multiplying total water depth by the inside diameter of the casing. This figure is one well volume.

C. Well Purging and Sampling

1. Prior to sampling, a minimum of three to five well volumes are purged from each well to ensure that water sampled is representative of the groundwater within the formation.
2. Measurements of pH, conductivity and temperature are taken at frequent intervals during the purge. Stabilization of these values indicates that representative formation fluids are being removed from the well.
3. In the event that the well is pumped dry, an alternate procedure will be followed. Once a well is pumped dry, the water that enters the well during recovery is, by definition, representative formation water. The well will, therefore, be pumped dry and allowed to recover to 80% or more of the original water level.
4. Purge water is pumped directly into barrels on site until the proper method of disposal is determined.
5. Samples pumped directly into sampling bottles prepared by the state certified laboratory contracted for the particular job were labeled and placed in refrigerated coolers for transport to the laboratory.
6. Samples are delivered directly to the lab on the same day of sampling by courier, whenever practical. If next day delivery is necessary, the samples are kept refrigerated at 4 degrees C overnight and delivered to the laboratory the following morning.
7. Samples are accompanied by a Chain of Custody form which documents the time, date and responsible person during each step of the transportation process.
8. The JHK coded sample numbering system allows identification of sample and client to JHK, while not revealing the client to the laboratory or other interested parties.

J. H. KLEINFELDER & ASSOCIATES

Water samples are numbered in the following manner:

W-XX-YY

Where:

W - designates water sample  
XX - well number  
YY - sequential sample number

For example, W-01-22 indicates a water sample from well number 1. The sample is the 22nd water sample taken at the site.

9. The complete information on the sample label includes:
  - Date and time
  - Client job number (never client name)
  - Sample number
  - Initials of sampler
  - Analysis desired (if known)
  - Preservatives in sample bottle (usually noted by lab)
10. Each sample bottle is given a separate sequential number.

J. H. KLEINFELDER & ASSOCIATES

APPENDIX B

BROWN AND CALDWELL



ANALYTICAL LABORATORIES

RECEIVED  
AUG 04 1986  
JHX & A LA

LOG NO: P86-07-160

Received: 09 JUL 86

Reported: 30 JUL 86

Ken Durand  
J. H. Kleinfelder & Associates  
901 W. Victoria Street, Suite G  
Compton, California 90220

Project: Q-1014-3

## REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION , GROUND WATER SAMPLES	DATE SAMPLED
07-160-1	W-07-(516-532) Q-1014-3	08 JUL 86
07-160-2	W-02-(535-551) Q-1014-3	08 JUL 86
07-160-3	W-08-(552-568) Q-1014-3	08 JUL 86
07-160-4	W-00-(533 & 534)	08 JUL 86

PARAMETER	07-160-1	07-160-2	07-160-3	07-160-4
Purgeable Priority Pollutants				
Extraction	07/19/86	07/19/86	07/19/86	07/19/86
1,1-Dichloroethane, ug/L	8	<1	76	<1
1,1-Dichloroethylene, ug/L	2	<1	8	<1
1,2-Dichloroethane, ug/L	<1	3	14	<1
Acrolein, ug/L	<10	<10	<10	<10
Acrylonitrile, ug/L	<10	<10	<10	<10
Chloroform, ug/L	<1	<1	2	<1
Ethylbenzene, ug/L	4	3	2	<1
Trichloroethylene, ug/L	67	12	28	<1
Toluene, ug/L	5	3	3	2
trans-1,2-Dichloroethylene, ug/L	9	<1	6	<1
Other Purgeable Priority Pollutants,	<1	<1	<1	<1

## Semi-Quantified Results \*\*

Ethylcyclohexane, ug/L	10	---	10	---
Ethylmethylcresol, ug/L	10	---	20	---
Octahydro,1H-Indene, ug/L	10	---	10	---
Octahydro-Methyl Pentalene, ug/L	10	---	---	---
Trimethylcyclohexane, ug/L	---	---	20	---
Trimethylcyclohexane, ug/L	20	---	---	---
Xylene Isomers, ug/L	4	2	1	1

\*\* Quantification based upon comparison of total ion count of the compound with that of the nearest internal standard.

LOG NO: P86-07-160

Received: 09 JUL 86

Reported: 30 JUL 86

Ken Durand  
J. H. Kleinfelder & Associates  
901 W. Victoria Street, Suite G  
Compton, California 90220

Project: Q-1014-3

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION , GROUND WATER SAMPLES	DATE SAMPLED			
07-160-1	W-07-(516-532) Q-1014-3	08 JUL 86			
07-160-2	W-02-(535-551) Q-1014-3	08 JUL 86			
07-160-3	W-08-(552-568) Q-1014-3	08 JUL 86			
07-160-4	W-00-(533 & 534)	08 JUL 86			
PARAMETER	07-160-1	07-160-2	07-160-3	07-160-4	
Hexavalent Chromium, mg/L	<0.02	<0.02	<0.02	---	
Nitrate Nitrogen					
Nitrate (as NO3), mg/L	19	24	14	---	
Nitrate (as N), mg/L	4.3	5.4	3.2	---	
Quadruplicate TOC:					
TOC, Average, mg/L	5	<3	8	---	
TOC, Standard Deviation, mg/L	2.06	0	0.31	---	
TOC, 1st Replicate, mg/L	5	<3	8	---	
TOC, 2nd Replicate, mg/L	8	<3	8	---	
TOC, 3rd Replicate, mg/L	5	<3	9	---	
TOC, 4th Replicate, mg/L	3	<3	8	---	
Quadruplicate Conductivity:					
Sp. Cond., Average, umhos/cm	1900	1800	1700	---	
Sp. Cond., Std. Deviation, umhos/cm	0	0	0	---	
Sp. Cond., 1st Replicate, umhos/cm	1900	1800	1700	---	
Sp. Cond., 2nd Replicate, umhos/cm	1900	1800	1700	---	
Sp. Cond., 3rd Replicate, umhos/cm	1900	1800	1700	---	
Sp. Cond., 4th Replicate, umhos/cm	1900	1800	1700	---	

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Received: 09 JUL 86


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Ken Durand  
J. H. Kleinfelder & Associates  
901 W. Victoria Street, Suite G  
Compton, California 90220

Project: Q-1014-3

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION , GROUND WATER SAMPLES			DATE SAMPLED
07-160-1	W-07-(516-532) Q-1014-3			08 JUL 86
07-160-2	W-02-(535-551) Q-1014-3			08 JUL 86
07-160-3	W-08-(552-568) Q-1014-3			08 JUL 86
07-160-4	W-00-(533 & 534)			08 JUL 86
PARAMETER	07-160-1	07-160-2	07-160-3	07-160-4
Quadruplicate pH:				
pH, Average, Units	7.4	7.7	7.4	---
pH, Standard Deviation, Units	0	0.1	0.1	---
pH, 1st Replicate, Units	7.4	7.7	7.5	---
pH, 2nd Replicate, Units	7.4	7.8	7.4	---
pH, 3rd Replicate, Units	7.4	7.6	7.4	---
pH, 4th Replicate, Units	7.4	7.6	7.4	---
Chloride, mg/L	280	220	170	---
Quadruplicate TOX:				
TOX, 1st Replicate, ug/L	<80	<80	<80	---
TOX, 2nd Replicate, ug/L	<80	<80	<80	---
TOX, 3rd Replicate, ug/L	<80	<80	<80	---
TOX, 4th Replicate, ug/L	<80	<80	<80	---
TOX, Average, ug/L	<80	<80	<80	---
TOX, Standard Deviation, ug/L	0	0	0	---
Cadmium, mg/L	<0.01	<0.01	<0.01	---
Chromium, mg/L	<0.03	<0.03	<0.03	---
Copper, mg/L	<0.02	<0.02	<0.02	---
Zinc, mg/L	<0.04	<0.04	<0.04	---
Dissolved Digestion, Date	07/16/86	07/16/86	07/16/86	---

  
Edward Wilson, Laboratory Director

BROWN AND CALDWELL



ANALYTICAL LABORATORIES

RECEIVED

AUG 04 1986

JHK &amp; A LA

LOG NO: P86-07-150

Received: 08 JUL 86

Reported: 29 JUL 86

Ken Durand  
J. H. Kleinfelder & Associates  
901 W. Victoria Street, Suite G  
Compton, California 90220

Project: Q-1014-3

## REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION , GROUND WATER SAMPLES					DATE SAMPLED
07-150-1	W-00-(461 & 462) Q-1014-3					07 JUL 86
07-150-2	W-00-(497 & 498) Q-1014-3					07 JUL 86
07-150-3	W-01-(463-479) Q-1014-3					07 JUL 86
07-150-4	W-05-(480-496) Q-1014-3					07 JUL 86
J7-150-5	W-6B-(498-515) Q-1014-3					07 JUL 86
PARAMETER	07-150-1	07-150-2	07-150-3	07-150-4	07-150-5	
Hexavalent Chromium, mg/L	---	---	<0.02	<0.02	<0.02	
Nitrate Nitrogen						
Nitrate (as NO <sub>3</sub> ), mg/L	---	---	18	55	31	
Nitrate (as N), mg/L	---	---	4.1	12	7.0	
Quadruplicate TOC:						
TOC, Average, mg/L	---	---	35	5	<3	
TOC, Standard Deviation, mg/L	---	---	3.16	1.26	0	
TOC, 1st Replicate, mg/L	---	---	31	5	<3	
TOC, 2nd Replicate, mg/L	---	---	34	5	<3	
TOC, 3rd Replicate, mg/L	---	---	38	4	<3	
TOC, 4th Replicate, mg/L	---	---	37	7	<3	
Quadruplicate Conductivity:						
Sp. Cond., Average, umhos/cm	---	---	1650	1400	1400	
Sp. Cond., Std. Deviation, umhos/cm	---	---	0	0	0	
Sp. Cond., 1st Replicate, umhos/cm	---	---	1650	1400	1400	
Sp. Cond., 2nd Replicate, umhos/cm	---	---	1650	1400	1400	
Sp. Cond., 3rd Replicate, umhos/cm	---	---	1650	1400	1400	
Sp. Cond., 4th Replicate, umhos/cm	---	---	1650	1400	1400	
Quadruplicate Conductivity:, umhos/cm	---	---	0	---	---	

LOG NO: P86-07-150

Received: 08 JUL 86

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Ken Durand  
J. H. Kleinfelder & Associates  
901 W. Victoria Street, Suite G  
Compton, California 90220

Project: Q-1014-3

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION , GROUND WATER SAMPLES					DATE SAMPLED
07-150-1	W-00-(461 & 462) Q-1014-3					07 JUL 86
07-150-2	W-00-(497 & 498) Q-1014-3					07 JUL 86
07-150-3	W-01-(463-479) Q-1014-3					07 JUL 86
07-150-4	W-05-(480-496) Q-1014-3					07 JUL 86
07-150-5	W-6B-(498-515) Q-1014-3					07 JUL 86
PARAMETER	07-150-1	07-150-2	07-150-3	07-150-4	07-150-5	
Quadruplicate pH:						
pH, Average, Units	---	---	7.2	7.3	7.5	
pH, Standard Deviation, Units	---	---	0.1	0.1	0.1	
pH, 1st Replicate, Units	---	---	7.3	7.3	7.6	
pH, 2nd Replicate, Units	---	---	7.2	7.3	7.5	
pH, 3rd Replicate, Units	---	---	7.2	7.3	7.5	
pH, 4th Replicate, Units	---	---	7.2	7.4	7.5	
Chloride, mg/L	---	---	650	79	82	
Quadruplicate TOX:						
TOX, 1st Replicate, ug/L	---	---	<80	650	<80	
TOX, 2nd Replicate, ug/L	---	---	<80	650	<80	
TOX, 3rd Replicate, ug/L	---	---	<80	640	<80	
TOX, 4th Replicate, ug/L	---	---	<80	650	<80	
TOX, Average, ug/L	---	---	<80	650	<80	
TOX, Standard Deviation, ug/L	---	---	0	5	0	
Cadmium, mg/L	---	---	<0.01	<0.01	<0.01	
Chromium, mg/L	---	---	<0.03	<0.03	<0.03	
Copper, mg/L	---	---	<0.02	<0.02	<0.02	
Zinc, mg/L	---	---	0.04	<0.04	<0.04	

LOG NO: P86-07-150

Received: 08 JUL 86

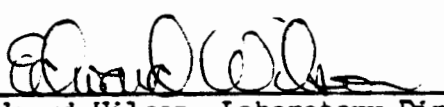
Reported: 29 JUL 86

Ken Durand  
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901 W. Victoria Street, Suite G  
Compton, California 90220

Project: Q-1014-3

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION , GROUND WATER SAMPLES					DATE SAMPLED
07-150-1	W-00-(461 & 462) Q-1014-3					07 JUL 86
07-150-2	W-00-(497 & 498) Q-1014-3					07 JUL 86
07-150-3	W-01-(463-479) Q-1014-3					07 JUL 86
07-150-4	W-05-(480-496) Q-1014-3					07 JUL 86
07-150-5	W-6B-(498-515) Q-1014-3					07 JUL 86
PARAMETER	07-150-1	07-150-2	07-150-3	07-150-4	07-150-5	
Nitric Acid Digestion, Date	---	---	07/15/86	07/15/86	07/15/86	
Purgeable Priority Pollutants						
Extraction	07/18/86	07/18/86	07/18/86	07/18/86	07/18/86	
1,1,1-Trichloroethane, ug/L	<1	<1	<1	2.5	<1	
1,1-Dichloroethane, ug/L	<1	<1	<1	2	<1	
1,1-Dichloroethylene, ug/L	<1	<1	<1	3	<1	
1,2-Dichloroethane, ug/L	<1	<1	1	<1	<1	
Acrolein, ug/L	<10	<10	<10	<10	<10	
Acrylonitrile, ug/L	<10	<10	<10	<10	<10	
Carbon Tetrachloride, ug/L	<1	<1	<1	45.5	<1	
Chloroform, ug/L	<1	<1	<1	14.5	<1	
Tetrachloroethylene, ug/L	<1	<1	<1	1	<1	
Trichloroethylene, ug/L	<1	<1	16	64	19	
Other Purgeable Priority Pollutants,	<1	<1	<1	<1	<1	

  
Edward Wilson, Laboratory Director

BROWN AND CALDWELL



ANALYTICAL LABORATORIES

RECEIVED

JUL 05 1986

JHK &amp; A LA

LOG NO: P86-07-186

Received: 10 JUL 86

Reported: 30 JUL 86

Ken Durand  
J. H. Kleinfelder & Associates  
901 W. Victoria Street, Suite G  
Compton, California 90220

Project: Q1014-3

## REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION , GROUND WATER SAMPLES	DATE SAMPLED
07-186-1	W-00-(596 & 570) Q1014-3	09 JUL 86
07-186-2	W-00-(643 & 644) Q1014-3	09 JUL 86
07-186-3	W-00-(607 & 608) Q1014-3	09 JUL 86
07-186-4	W-03-(609-625) Q1014-3	09 JUL 86
07-186-5	W-04-(626-642) Q1014-3	09 JUL 86

PARAMETER	07-186-1	07-186-2	07-186-3	07-186-4	07-186-5
Hexavalent Chromium, mg/L	---	---	---	<0.02	<0.02 120
Nitrate Nitrogen					
Nitrate (as NO3), mg/L	---	---	---	29	2.4
Nitrate (as N), mg/L	---	---	---	6.5	0.5
Quadruplicate TOC:					
TOC, Average, mg/L	---	---	---	44	110
TOC, Standard Deviation, mg/L	---	---	---	6.40	8.17
TOC, 1st Replicate, mg/L	---	---	---	39	100
TOC, 2nd Replicate, mg/L	---	---	---	40	110
TOC, 3rd Replicate, mg/L	---	---	---	45	120
TOC, 4th Replicate, mg/L	---	---	---	53	110
Quadruplicate Conductivity:					
Sp. Cond., Average, umhos/cm	---	---	---	2200	3500
Sp. Cond., Std. Deviation, umhos/cm	---	---	---	0	0
Sp. Cond., 1st Replicate, umhos/cm	---	---	---	2200	3500
Sp. Cond., 2nd Replicate, umhos/cm	---	---	---	2200	3500
Sp. Cond., 3rd Replicate, umhos/cm	---	---	---	2200	3500
Sp. Cond., 4th Replicate, umhos/cm	---	---	---	2200	3500

LOG NO: P86-07-186

Received: 10 JUL 86

Reported: 30 JUL 86

Ken Durand  
J. H. Kleinfelder & Associates  
901 W. Victoria Street, Suite G  
Compton, California 90220

Project: Q1014-3

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION , GROUND WATER SAMPLES					DATE SAMPLED
07-186-1	W-00-(596 & 570) Q1014-3					09 JUL 86
07-186-2	W-00-(643 & 644) Q1014-3					09 JUL 86
07-186-3	W-00-(607 & 608) Q1014-3					09 JUL 86
07-186-4	W-03-(609-625) Q1014-3					09 JUL 86
07-186-5	W-04-(626-642) Q1014-3					09 JUL 86
PARAMETER	07-186-1	07-186-2	07-186-3	07-186-4	07-186-5	
Quadruplicate pH:						
pH, Average, Units	---	---	---	7.2	7.1	
pH, Standard Deviation, Units	---	---	---	0.1	0.2	
pH, 1st Replicate, Units	---	---	---	7.0	7.0	
pH, 2nd Replicate, Units	---	---	---	7.3	6.9	
pH, 3rd Replicate, Units	---	---	---	7.2	7.4	
pH, 4th Replicate, Units	---	---	---	7.2	6.9	
Chloride, mg/L	---	---	---	400	770	
Quadruplicate TOX:						
TOX, 1st Replicate, ug/L	---	---	---	180	190	
TOX, 2nd Replicate, ug/L	---	---	---	180	170	
TOX, 3rd Replicate, ug/L	---	---	---	170	170	
TOX, 4th Replicate, ug/L	---	---	---	UTD	180	
TOX, Average, ug/L	---	---	---	180	180	
TOX, Standard Deviation, ug/L	---	---	---	6	10	
Cadmium, mg/L	---	---	---	<0.01	0.04	
Chromium, mg/L	---	---	---	<0.03	120	
Copper, mg/L	---	---	---	<0.02	<0.02	
Zinc, mg/L	---	---	---	<0.04	<0.04	

LOG NO: P86-07-186

Received: 10 JUL 86

Reported: 30 JUL 86

Ken Durand  
J. H. Kleinfelder & Associates  
901 W. Victoria Street, Suite G  
Compton, California 90220

Project: Q1014-3

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION , GROUND WATER SAMPLES					DATE SAMPLED
07-186-1	W-00-(596 & 570) Q1014-3					09 JUL 86
07-186-2	W-00-(643 & 644) Q1014-3					09 JUL 86
07-186-3	W-00-(607 & 608) Q1014-3					09 JUL 86
07-186-4	W-03-(609-625) Q1014-3					09 JUL 86
07-186-5	W-04-(626-642) Q1014-3					09 JUL 86
PARAMETER	07-186-1	07-186-2	07-186-3	07-186-4	07-186-5	
Dissolved Digestion, Date	---	---	---	07/16/86	07/16/86	

LOG NO: P86-07-186

Received: 10 JUL 86

Reported: 30 JUL 86

Ken Durand  
J. H. Kleinfelder & Associates  
901 W. Victoria Street, Suite G  
Compton, California 90220

Project: Q1014-3

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION , GROUND WATER SAMPLES	DATE SAMPLED
07-186-1	W-00-(596 & 570) Q1014-3	09 JUL 86
07-186-2	W-00-(643 & 644) Q1014-3	09 JUL 86
07-186-3	W-00-(607 & 608) Q1014-3	09 JUL 86
07-186-4	W-03-(609-625) Q1014-3	09 JUL 86
07-186-5	W-04-(626-642) Q1014-3	09 JUL 86

PARAMETER	07-186-1	07-186-2	07-186-3	07-186-4	07-186-5
Purgeable Priority Pollutants					
Extraction	07/18/86	07/18/86	07/18/86	07/18/86	07/19/86
1,1-Dichloroethane, ug/L	<1	<1	<1	4	57
1,1-Dichloroethylene, ug/L	<1	<1	<1	7	41
1,2-Dichloroethane, ug/L	<1	<1	<1	6	69
Acrolein, ug/L	<10	<10	<10	<10	<10
Acrylonitrile, ug/L	<10	<10	<10	<10	<10
Carbon Tetrachloride, ug/L	<1	<1	<1	110	<1
Chloroform, ug/L	<1	<1	<1	97	8
Ethylbenzene, ug/L	<1	<1	<1	<1	1100
Methylene Chloride, ug/L	<1	<1	<1	<1	17
Trichloroethylene, ug/L	<1	<1	<1	170	200
Toluene, ug/L	<1	<1	<1	<1	330
trans-1,2-Dichloroethylene, ug/L	<1	<1	<1	<1	10
Other Purgeable Priority Pollutants,	<1	<1	<1	<1	<1

Semi-Quantified Results \*\*

Xylene Isomers, ug/L	---	---	---	---	300
----------------------	-----	-----	-----	-----	-----

\*\* Quantification based upon comparison of total ion count of the compound with that of the nearest internal standard.

LOG NO: P86-07-186

Received: 10 JUL 86

Reported: 30 JUL 86

Ken Durand  
J. H. Kleinfelder & Associates  
901 W. Victoria Street, Suite G  
Compton, California 90220

Project: Q1014-3

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION , GROUND WATER SAMPLES	DATE SAMPLED	
07-186-6	W-10-(571-587) Q1014-3	09 JUL 86	
07-186-7	W-11-(588-604) Q1014-3		
PARAMETER		07-186-6	07-186-7
Hexavalent Chromium, mg/L		<0.02	<0.02
Nitrate Nitrogen			
Nitrate (as NO3), mg/L		0.6	4.8
Nitrate (as N), mg/L		0.1	1.1
Quadruplicate TOC:			
TOC, Average, mg/L		130	120
TOC, Standard Deviation, mg/L		5.00	5.77
TOC, 1st Replicate, mg/L		130	110
TOC, 2nd Replicate, mg/L		130	110
TOC, 3rd Replicate, mg/L		130	120
TOC, 4th Replicate, mg/L		140	120
Quadruplicate Conductivity:			
Sp. Cond., Average, umhos/cm		1600	1700
Sp. Cond., Std. Deviation, umhos/cm		100	0
Sp. Cond., 1st Replicate, umhos/cm		1600	1700
Sp. Cond., 2nd Replicate, umhos/cm		1600	1700
Sp. Cond., 3rd Replicate, umhos/cm		1400	1700
Sp. Cond., 4th Replicate, umhos/cm		1600	1700

LOG NO: P86-07-186

Received: 10 JUL 86

Reported: 30 JUL 86

Ken Durand  
J. H. Kleinfelder & Associates  
901 W. Victoria Street, Suite G  
Compton, California 90220


Project: Q1014-3

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION , GROUND WATER SAMPLES	DATE SAMPLED
07-186-6	W-10-(571-587) Q1014-3	09 JUL 86
07-186-7	W-11-(588-604) Q1014-3	
PARAMETER	07-186-6	07-186-7
Purgeable Priority Pollutants		
Extraction	07/18/86	07/19/86
1,1-Dichloroethane, ug/L	6	10
1,1-Dichloroethylene, ug/L	7	5
1,2-Dichloroethane, ug/L	86	17
Acrolein, ug/L	<10	<10
Acrylonitrile, ug/L	<10	<10
Chloroform, ug/L	<1	10
Ethylbenzene, ug/L	<1	2200
Trichloroethylene, ug/L	56	76
Toluene, ug/L	<1	5200
Other Purgeable Priority Pollutants,	<1	<1
Semi-Quantified Results **		
Xylene Isomers, ug/L	70	1500

\*\* Quantification based upon comparison of total ion count of the compound with that of the nearest internal standard.

UTD = Unable to determine; bottle broken.

  
Edward Wilson, Laboratory Director

BROWN AND CALDWELL



ANALYTICAL LABORATORIES

**RECEIVED**  
AUG 04 1986  
JHK & A LA

LOG NO: P86-07-213

Received: 11 JUL 86

Reported: 30 JUL 86

Ken Durand  
J. H. Kleinfelder & Associates  
901 W. Victoria Street, Suite G  
Compton, California 90220

Project: Q-1014-3

## REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION , GROUND WATER SAMPLES	DATE SAMPLED		
07-213-1	W-4A-(662-678) Q-1014-3	10 JUL 86		
07-213-2	W-09-(645-661) Q-1014-3	10 JUL 86		
07-213-3	W-00-(679 & 680) Q-1014-3	10 JUL 86		
PARAMETER	07-213-1	07-213-2	07-213-3	
Hexavalent Chromium, mg/L	<0.02	<0.02	---	
Nitrate Nitrogen				
Nitrate (as NO3), mg/L	27	14	---	
Nitrate (as N), mg/L	6.1	3.2	---	
Quadruplicate TOC:				
TOC, Average, mg/L	<3	28	---	
TOC, Standard Deviation, mg/L	1.7	1.5	---	
TOC, 1st Replicate, mg/L	<3	27	---	
TOC, 2nd Replicate, mg/L	<3	29	---	
TOC, 3rd Replicate, mg/L	3	26	---	
TOC, 4th Replicate, mg/L	3	29	---	
Quadruplicate Conductivity:				
Sp. Cond., Average, umhos/cm	850	2000	---	
Sp. Cond., Std. Deviation, umhos/cm	0	0	---	
Sp. Cond., 1st Replicate, umhos/cm	850	2000	---	
Sp. Cond., 2nd Replicate, umhos/cm	850	2000	---	
Sp. Cond., 3rd Replicate, umhos/cm	850	2000	---	
Sp. Cond., 4th Replicate, umhos/cm	850	2000	---	

LOG NO: P86-07-213

Received: 11 JUL 86

Reported: 30 JUL 86

Ken Durand  
J. H. Kleinfelder & Associates  
901 W. Victoria Street, Suite G  
Compton, California 90220

Project: Q-1014-3

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION , GROUND WATER SAMPLES	DATE SAMPLED		
07-213-1	W-4A-(662-678) Q-1014-3	10 JUL 86		
07-213-2	W-09-(645-661) Q-1014-3	10 JUL 86		
07-213-3	W-00-(679 & 680) Q-1014-3	10 JUL 86		
PARAMETER		07-213-1	07-213-2	07-213-3
Quadruplicate pH:				
pH, Average, Units		7.6	7.3	---
pH, Standard Deviation, Units		0.1	0.1	---
pH, 1st Replicate, Units		7.6	7.2	---
pH, 2nd Replicate, Units		7.7	7.2	---
pH, 3rd Replicate, Units		7.6	7.4	---
pH, 4th Replicate, Units		7.6	7.2	---
Chloride, mg/L		110	250	---
Quadruplicate TOX:				
TOX, 1st Replicate, ug/L		<80	120	---
TOX, 2nd Replicate, ug/L		<80	100	---
TOX, 3rd Replicate, ug/L		<80	100	---
TOX, 4th Replicate, ug/L		<80	90	---
TOX, Average, ug/L		<80	100	---
TOX, Standard Deviation, ug/L		0	13	---
Cadmium, mg/L		<0.01	<0.01	---
Chromium, mg/L		<0.03	<0.03	---
Copper, mg/L		<0.02	<0.02	---
Zinc, mg/L		<0.04	<0.04	---
Dissolved Digestion, Date		07/16/86	07/16/86	---

LOG NO: P86-07-213

Received: 11 JUL 86

Reported: 30 JUL 86


Ken Durand  
J. H. Kleinfelder & Associates  
901 W. Victoria Street, Suite G  
Compton, California 90220

Project: Q-1014-3

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION , GROUND WATER SAMPLES	DATE SAMPLED
07-213-1	W-4A-(662-678) Q-1014-3	10 JUL 86
07-213-2	W-09-(645-661) Q-1014-3	10 JUL 86
07-213-3	W-00-(679 & 680) Q-1014-3	10 JUL 86

PARAMETER	07-213-1	07-213-2	07-213-3
Purgeable Priority Pollutants			
Extraction	07/22/86	07/21/86	07/21/86
1,1,1-Trichloroethane, ug/L	<1	3	<1
1,1,2-Trichloroethane, ug/L	<1	<1	2
1,1-Dichloroethane, ug/L	11	50	<1
1,1-Dichloroethylene, ug/L	2	18	<1
1,2-Dichloroethane, ug/L	<1	13	<1
Acrolein, ug/L	<10	<10	<10
Acrylonitrile, ug/L	<10	<10	<10
Chloroform, ug/L	<1	4	<1
Trichloroethylene, ug/L	7	3	<1
trans-1,2-Dichloroethylene, ug/L	2	1	<1
Other Purgeable Priority Pollutants,	<1	<1	<1

  
Edward Wilson, Laboratory Director

J. H. KLEINFELDER & ASSOCIATES

APPENDIX C

# CHAIN OF CUSTODY RECORD

SAMPLERS: (Signature)

Mark Edlund

Phone: \_\_\_\_\_

SHIP TO:

Brown & Caldwell

373 S Foil Oaks Ave.

Pasadena, Ca

ATTENTION: \_\_\_\_\_

Phone No. \_\_\_\_\_

## SHIPPING INFORMATION

Shipper J. H. Kleinfelder & Assoc.

Address 901 W Victoria Compton

Date Shipped 7-9-86

Shipment Service B & C

Airbill No. \_\_\_\_\_

Cooler No. \_\_\_\_\_

Relinquished by: (Signature)

Mark Edlund

Received by: (Signature)

Mark Edlund

Date/Time

7/9/86 11:02

Relinquished by: (Signature)

Received by: (Signature)

Kit Wong

Date/Time

7/9/86 12:20 p.m.

Relinquished by: (Signature)

Received by: (Signature)

Date/Time

Relinquished by: (Signature)

Receive for laboratory by: (Signature)

Date/Time

\* Analysis laboratory should complete, "sample condition upon receipt", section below, sign and return top copy to J. H. KLEINFELDER & ASSOCIATES,

Sample Number	Site Identification	Date Sampled	Analysis Requested	Sample Condition Upon Receipt
<u>W-07-516</u>	<u>Q1014-3</u>	<u>7-9-86</u>	<u>EPA method 624</u>	
<u>517 Dup</u>				
<u>518</u>			<u>TOL (Beckman)</u>	
<u>519</u>				
<u>520</u>				
<u>521</u>				
<u>522</u>			<u>TOX</u>	
<u>523</u>				
<u>524</u>				
<u>525</u>				
<u>526</u>			<u>Nitrites (N &amp; NO<sub>2</sub>)</u>	
<u>527</u>			<u>pH (and)</u>	
<u>528</u>				
<u>529</u>				
<u>530</u>				

LAB INSTRUCTIONS: Laboratory reports should reference and be billed by site ID# and contain the following:

- summary of analytical methodology and QA work (blanks, spikes, duplicates)
- dates for (a) sampling, (b) lab receipt, (c) extraction, (d) injection/analysis
- detection limits for all constituents analyzed for and reporting of all constituents detected which were not specifically designated

**RECEIVED**

**JUL 14 1986**

**JHK & A LA**

# CHAIN OF CUSTODY RECORD

SAMPLERS: (Signature)

Mark Edmund

Phone: \_\_\_\_\_

SHIP TO:

Brown & Caldwell

373 S Fair Oaks Ave.

Pasadena Ca

ATTENTION: \_\_\_\_\_

Phone No. \_\_\_\_\_

## SHIPPING INFORMATION

Shipper J.H. Kleinfelder & Assoc.

Address 901 W Victoria Linton

Date Shipped 7-9-86

Shipment Service BFC

Airbill No. \_\_\_\_\_

Cooler No. \_\_\_\_\_

Relinquished by: (Signature)

Mark Edmund

Received by: (Signature)

John Wilson

Date/Time

7/9/86 11:00 AM

Relinquished by: (Signature)

John Wilson

Received by: (Signature)

John Wilson

Date/Time

7/9/86 12:20 PM

Relinquished by: (Signature)

Received by: (Signature)

Date/Time

Relinquished by: (Signature)

Receive for laboratory by: (Signature)

Date/Time

\* Analysis laboratory should complete, "sample condition upon receipt", section below, sign and return top copy to J. H. KLEINFELDER & ASSOCIATES,

Sample Number	Site Identification	Date Sampled	Analysis Requested	Sample Condition Upon Receipt
<u>W-07-531</u>	<u>Q1014-3</u>	<u>7-8-86</u>	<u>Chromium (Total, Hex)</u>	<u>Cadmium, Copper</u>
<u>↓ ↓ 532</u>			<u>Zinc, Chloride</u>	
<u>W-00-533</u>			<u>EPA method 624</u>	
<u>↓ ↓ 534 Dup</u>				
<u>W-02-535</u>			<u>EPA method 624</u>	
<u>" 536 Dup</u>				
<u>537</u>			<u>TOC (Beckman)</u>	
<u>538</u>				
<u>539</u>				
<u>540</u>				
<u>541</u>			<u>TOX</u>	
<u>542</u>				
<u>543</u>				
<u>↓ ↓ 544</u>				

LAB INSTRUCTIONS: Laboratory reports should reference and be billed by site ID# and contain the following:

- summary of analytical methodology and QA work (blanks, spikes, duplicates)
- dates for (a) sampling, (b) lab receipt, (c) extraction, (d) injection/analysis
- detection limits for all constituents analyzed for and reporting of all constituents detected which were not specifically designated

- 
- 
- 
- 
- 

July 14 1986

JHK & A LA

# CHAIN OF CUSTODY RECORD

SAMPLERS: (Signature)

*Mark Eklund*

Phone: \_\_\_\_\_

SHIP TO:

*Brown & Goldsmith*

*373 S Fair Oaks*

*Pasadena Ca.*

ATTENTION: \_\_\_\_\_

Phone No. \_\_\_\_\_

## SHIPPING INFORMATION

Shipper *J.H. Kleinfelder & Assoc.*

Address *901 W Victoria*

Date Shipped *7-5-86*

Shipment Service *BEC*

Airbill No. \_\_\_\_\_

Cooler No. \_\_\_\_\_

Relinquished by: (Signature)

*Mark Eklund*

Received by: (Signature)

*Thit Wong*

Date/Time

*7/9/86 11:00*

Relinquished by: (Signature)

Received by: (Signature)

*Thit Wong*

Date/Time

*7/19/86 12:00p.*

Relinquished by: (Signature)

Received by: (Signature)

Date/Time

Relinquished by: (Signature)

Receive for laboratory by: (Signature)

Date/Time

\* Analysis laboratory should complete, "sample condition upon receipt", section below, sign and return top copy to J. H. KLEINFELDER & ASSOCIATES,

Sample Number	Site Identification	Date Sampled	Analysis Requested	Sample Condition Upon Receipt
<i>W-02-545</i>	<i>001014-3</i>	<i>7-8-86</i>	<i>Nitrites (N &amp; NO<sub>2</sub>)</i>	
<i>546</i>			<i>pH, Cands</i>	
<i>547</i>				
<i>548</i>				
<i>549</i>				
<i>550</i>			<i>metals: Chromium (Total &amp; Hex), Cadmium, Copper,</i>	
<i>551</i>			<i>Zinc, Chloride</i>	
<i>W-08-552</i>			<i>EPA method 624</i>	
<i>553 Dup</i>				
<i>554</i>			<i>TOC (Beckman)</i>	
<i>555</i>				
<i>556</i>				
<i>557</i>				

LAB INSTRUCTIONS: Laboratory reports should reference and be billed by site ID# and contain the following:

- summary of analytical methodology and QA work (blanks, spikes, duplicates) dates for (a) sampling, (b) lab receipt, (c) extraction, (d) injection/analysis
- detection limits for all constituents analyzed for and reporting of all constituents detected which specifically designated
- 
- 
- 

RECEIVED

JUL 14 1986

JHK LA

100

SAMPLERS: (Signature) Mark Olson

SHIP TO:

Brown & Caldwell  
373 S. Fair Oaks Ave.  
Pasadena Calif.

**Phone No.**

Shipper J. H. Klein Alder & Assoc.

Address 901 W Victoria Compton.

Date Shipped 7-9-86

Shipment Service BEC

Airbill No. \_\_\_\_\_

Cooler No. \_\_\_\_\_

Mack Ecklund

*[Signature]*

7/9/82	11:02 a.m.
--------	---------------

*[Signature]*

Kit Wong

7/19/86 12:20

11

[illegible]

1

**LAB INSTRUCTIONS:**

- 13

4)

RECEIVED

~~JHK & A LA~~

# CHAIN OF CUSTODY RECORD

SAMPLERS: (Signature)

*Mark Edmund*

Phone: \_\_\_\_\_

SHIP TO:

*Brown & Caldwell*

*323 Fair Oaks*

*Presdena CA*

ATTENTION: \_\_\_\_\_

Phone No. \_\_\_\_\_

## SHIPPING INFORMATION

Shipper *J.H. Kleinfelder*

Address *901 W Victoria (Crescent)*

Date Shipped *7-10-86*

Shipment Service *BEC*

Airbill No. \_\_\_\_\_

Cooler No. \_\_\_\_\_

Relinquished by: (Signature)

*Mark Edmund*

Received by: (Signature)

*Paul Holmes*

Date/Time

*7-10-86 3:20*

Relinquished by: (Signature)

*Paul Holmes*

Received by: (Signature)

*Tim Wong*

Date/Time

*7-10-86 4:05p*

Relinquished by: (Signature)

Received by: (Signature)

Date/Time

Relinquished by: (Signature)

Receive for laboratory by: (Signature)

Date/Time

\* Analysis laboratory should complete, "sample condition upon receipt", section below, sign and return top copy to J. H. KLEINFELDER & ASSOCIATES,

Sample Number	Site Identification	Date Sampled	Analysis Requested	Sample Condition Upon Receipt
<i>W-00-569</i>	<i>Q1014-3</i>	<i>7-9-86</i>	<i>1 sample EPA method 624</i>	
<i>570dp</i>			<i>1 sample EPA method 624</i>	
<i>W-10-571</i>			<i>1 sample EPA method 624</i>	
<i>572dp</i>			<i>1 sample EPA method 624</i>	
<i>573</i>			<i>1 sample EPA method 624</i>	
<i>574</i>			<i>1 sample EPA method 624</i>	
<i>575</i>			<i>1 sample EPA method 624</i>	
<i>576</i>			<i>1 sample EPA method 624</i>	
<i>577</i>			<i>1 sample EPA method 624</i>	
<i>578</i>			<i>1 sample EPA method 624</i>	
<i>579</i>			<i>1 sample EPA method 624</i>	
<i>580</i>			<i>1 sample EPA method 624</i>	
<i>581</i>			<i>1 sample EPA method 624</i>	
			<i>TOC (Reckman)</i>	
			<i>TOX</i>	
			<i>Nitrites (NENOS)</i>	

LAB INSTRUCTIONS: Laboratory reports should reference and be billed by site ID# and contain the following

- summary of analytical methodology and QA work (blanks, spikes, duplicates)
- dates for (a) sampling, (b) lab receipt, (c) extraction, (d) injection/analysis
- detection limits for all constituents analyzed for and reporting of all constituents detected which were not specifically designated

**RECEIVED**

**JUL 14 1986**

*Handwritten initials*

# CHAIN OF CUSTODY RECORD

SAMPLERS: (Signature)

*Mark Eklund*

Phone: \_\_\_\_\_

SHIP TO:

*Brann & Coldwell*

*373 S Fair Oaks*

*Pasadena Ca*

ATTENTION: \_\_\_\_\_

Phone No. \_\_\_\_\_

## SHIPPING INFORMATION

Shipper *J.H. Kleinfelder & Assoc.*

Address *901 W Victoria Compton*

Date Shipped *7-10-86*

Shipment Service *BEC*

Airbill No. \_\_\_\_\_

Cooler No. \_\_\_\_\_

Relinquished by: (Signature)

*Mark Eklund*

Received by: (Signature)

*[Signature]*

Date/Time

*7-10-86 3:00*

Relinquished by: (Signature)

*[Signature]*

Received by: (Signature)

*[Signature]*

Date/Time

*7-10-86 4:05 P.*

Relinquished by: (Signature)

Received by: (Signature)

Date/Time

Relinquished by: (Signature)

Receive for laboratory by: (Signature)

Date/Time

\* Analysis laboratory should complete, "sample condition upon receipt", section below, sign and return top copy to J. H. KLEINFELDER & ASSOCIATES,

Sample Number	Site Identification	Date Sampled	Analysis Requested	Sample Condition Upon Receipt
<i>W-10-582</i>	<i>Q1014-3</i>	<i>7-9-86</i>	<i>pH, Cond</i>	
<i>583</i>				
<i>584</i>				
<i>585</i>				
<i>586</i>				
<i>5870g</i>				
<i>W-11-588</i>				
<i>5890g</i>				
<i>590</i>				
<i>591</i>				
<i>592</i>				
<i>593</i>				

*Quads* { *pH, Cond* }

*metals* { *Chromium (Total & Hex)* *Cadmium, Copper* }

*zinc* { *zinc* }

*single* { *EPA method 624* }

*Quads* { *TOC (Beckman)* }

LAB INSTRUCTIONS: Laboratory reports should reference and be billed by site ID# and contain the following:

- summary of analytical methodology and QA work (blanks, spikes, duplicates)
- dates for (a) sampling, (b) lab receipt, (c) extraction, (d) injection/analysis
- detection limits for all constituents analyzed for and reporting of all constituents detected which were not specifically designated

4) \_\_\_\_\_

5) \_\_\_\_\_

*JUL 14 1986*

*JHK & A LA*

# CHAIN OF CUSTODY RECORD

SAMPLERS: (Signature)

*Mark E. Kelly*

none:

SHIP TO:

*Brown & Caldwell*

*373 S. Fair Oaks*

*Pasadena Ca*

ATTENTION:

Phone No.

## SHIPPING INFORMATION

Shipper *J. H. Kleinfelder & Assoc*

Address *901 W. Victoria Compton*

Date Shipped *7-10-86*

Shipment Service *BPC*

Airbill No.

Cooler No.

Relinquished by: (Signature)

*Mark E. Kelly*

Received by: (Signature)

*Walter Holmes*

Date/Time

*7-10-86 3p*

Relinquished by: (Signature)

*Walter Holmes*

Received by: (Signature)

*Timothy*

Date/Time

*7-10-86 4:05p*

Relinquished by: (Signature)

Received by: (Signature)

Date/Time

Relinquished by: (Signature)

Receive for laboratory by: (Signature)

Date/Time

\*Analysis laboratory should complete, "sample condition upon receipt", section below, sign and return original (white) copy to J. H. KLEINFELDER & ASSOCIATES, 901 W. Victoria Street, Suite G, Compton, CA 90220.

Sample Number	Site Identification	Date Sampled	Analysis Requested	Sample Condition Upon Receipt
<i>W-11-594</i>	<i>Q10143</i>	<i>7-9-86</i>	<i>TOX</i>	
<i>595</i>				
<i>596</i>				
<i>597</i>				
<i>598</i>				
<i>599</i>				
<i>600</i>				
<i>601</i>				
<i>602</i>				
<i>603</i>				
<i>604</i>				
<i>not collected (misidentified)</i>				
<i>N-00-607</i>				
<i>608 dup</i>				
			<i>quads</i>	
			<i>quads</i>	
			<i>metals</i>	
			<i>chromium (Total &amp; Hex)</i>	<i>Cadmium, Copper</i>
			<i>Zinc chloride</i>	
			<i>simple</i>	
			<i>EPA method 624</i>	

INSTRUCTIONS: Laboratory reports should reference and be billed by site ID# and contain the following:

- summary of analytical methodology and QA work (blanks, spikes, duplicates)
- dates for (a) sampling, (b) lab receipt, (c) extraction, (d) injection/analysis
- detection limits for all constituents analyzed for and reporting of all constituents detected which were not specifically designated

# CHAIN OF CUSTODY RECORD

SAMPLERS: (Signature)

*Mark Ebel*

Phone: \_\_\_\_\_

SHIP TO:

*Brown E Caldwell*  
*373 S Fair Oaks*  
*Pasadena CA*

ATTENTION: \_\_\_\_\_

Phone No. \_\_\_\_\_

## SHIPPING INFORMATION

Shipper *J. H. Kleinfelder & Assoc*  
Address *901 W Victoria Compton*  
Date Shipped *7-10-86*  
Shipment Service *BEC*  
Airbill No. \_\_\_\_\_  
Cooler No. \_\_\_\_\_

Relinquished by: (Signature)

*Mark Ebel*

Received by: (Signature)

*Mark Ebel*

Date/Time

*7-10-86 3p*

Relinquished by: (Signature)

*Mark Ebel*

Received by: (Signature)

*Mark Ebel*

Date/Time

*7-10-86 4:05 p.m.*

Relinquished by: (Signature)

*Mark Ebel*

Received by: (Signature)

*Mark Ebel*

Date/Time

Relinquished by: (Signature)

*Mark Ebel*

Received for laboratory by\*: (Signature)

*Mark Ebel*

Date/Time

*7-10-86 4:05 p.m.*

\*Analysis laboratory should complete, "sample condition upon receipt", section below, sign and return original (white) copy to J. H. KLEINFELDER & ASSOCIATES, 901 W. Victoria Street, Suite G, Compton, CA 90220.

Sample Number	Site Identification	Date Sampled	Analysis Requested	Sample Condition Upon Receipt
<i>W-03-609</i>	<i>Q10143</i>	<i>7-9-86</i>	<i>EPA method 621</i>	
<i>610</i>			<i>TOC (Beckman)</i>	
<i>611</i>				
<i>612</i>				
<i>613</i>				
<i>614</i>				
<i>615</i>			<i>TOX</i>	
<i>616</i>				
<i>617</i>				
<i>618</i>				
<i>619</i>			<i>Metals (N &amp; NO<sub>3</sub>)</i>	
<i>620</i>			<i>pH Cond</i>	
<i>621</i>				
<i>622</i>				
<i>623</i>				

LAB INSTRUCTIONS: Laboratory reports should reference and be filed by site ID# and contain the following:

- summary of analytical methodology and QA work (blanks, spikes, duplicates)
- dates for (a) sampling, (b) lab receipt, (c) extraction, (d) injection/analysis
- detection limits for all constituents analyzed for and reporting of all constituents detected which were not specifically designated

RECEIVED

JUL 14 1986

JHA & A LA

# CHAIN OF CUSTODY RECORD

SAMPLERS: (Signature)

*Mark Okada*

Phone:

SHIP TO:

*Brown & Caldwell*  
*373 S Fort Oaks*  
*Pasadena CA*

ATTENTION:

Phone No.

## SHIPPING INFORMATION

Shipper *J.H. Kleinfelder & Assoc*  
 Address *901 W Victoria Compton*  
 Date Shipped *7-10-86*  
 Shipment Service *BFC*  
 Airbill No. \_\_\_\_\_  
 Cooler No. \_\_\_\_\_

Relinquished by: (Signature)

*Mark Okada*

Received by: (Signature)

*John Holmes*

Date/Time

*7-10-86 3:00 PM*

Relinquished by: (Signature)

*John Holmes*

Received by: (Signature)

*Kit Wong*

Date/Time

*7-10-86 4:05 PM*

Relinquished by: (Signature)

Received by: (Signature)

Date/Time

Relinquished by: (Signature)

Receive for laboratory by: (Signature)

Date/Time

\*Analysis laboratory should complete, "sample condition upon receipt", section below, sign and return original (white) copy to J. H. KLEINFELDER & ASSOCIATES, 901 W. Victoria Street, Suite G, Compton, CA 90220.

Sample Number	Site Identification	Date Sampled	Analysis Requested	Sample Condition Upon Receipt
<i>W-03-624</i>	<i>G1014-3</i>	<i>7-9-86</i>	<i>metals { Chromium (Total &amp; Hex), Cadmium, Copper, Zinc, chloride</i>	
<i>W-04-625</i>			<i>EPA method 624</i>	
<i>627</i>			<i>TOC (Beckman)</i>	
<i>628</i>				
<i>629</i>				
<i>630</i>				
<i>631</i>				
<i>632</i>			<i>TOX</i>	
<i>633</i>				
<i>634</i>				
<i>635</i>				
<i>636</i>			<i>Nitrate (N ENO<sub>3</sub>)</i>	

INSTRUCTIONS: Laboratory reports should reference and be billed by site ID# and contain the following:

- summary of analytical methodology and QA work (blanks, spikes, duplicates)
- dates for (a) sampling, (b) lab receipt, (c) extraction, (d) injection/analysis
- detection limits for all constituents analyzed for and reporting of all constituents detected which were specifically designated

*Yellow color is Chromium not organic*

**Figure 1**

2

**Abstract**

2

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**NAME**

1

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8.

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Received by: /Signature/

Date/Time

7. 1/2 2

Received by: (Signature)

Date/Time

... and

Received By: (Signature) \_\_\_\_\_

Date/Time

Receive for laboratory by: (Signature)

Date/Time

**Abstract**

**LAB**

●

1

111 14 1926

1336 0

# CHAIN OF CUSTODY RECORD

SAMPLERS: (Signature)

*Mark Alford*

Phone:

SHIP TO:

*Brown & Caldwell*

*323 S. Fort Oaks*

*Pasadena Ca*

ATTENTION:

Phone No.

## SHIPPING INFORMATION

Shipper *J. H. Kleinfelder & Assoc.*

Address *901 W. Victoria Compton*

Date Shipped *7-11-86*

Shipment Service *BFC*

Airbill No.

Cooler No.

Relinquished by: (Signature)

*Mark Alford*

Received by: (Signature)

*D. Alford*

Date/Time

*4:45*

Relinquished by: (Signature)

*D. Alford*

Received by: (Signature)

*Ryan McPae*

Date/Time

*7/11/86 4:45 PM*

Relinquished by: (Signature)

Received by: (Signature)

Date/Time

Relinquished by: (Signature)

Receive for laboratory by: (Signature)

Date/Time

\*Analysis laboratory should complete, "sample condition upon receipt", section below, sign and return original (white) copy to J. H. KLEINFELDER & ASSOCIATES, 901 W. Victoria Street, Suite G, Compton, CA 90220.

Sample Number	Site Identification	Date Sampled	Analysis Requested	Sample Condition Upon Receipt
<i>W-09-645</i>	<i>Q1014-3</i>	<i>7/10-86</i>	<i>EPA method 624</i>	
<i>646 Dup</i>				
<i>647</i>			<i>TOC (Berkmann)</i>	
<i>648</i>				
<i>649</i>				
<i>650</i>				
<i>651</i>			<i>TOX</i>	
<i>652</i>				
<i>653</i>				
<i>654</i>				
<i>655</i>			<i>Nitrate (NEMO)</i>	
<i>656</i>			<i>pH (cond)</i>	
<i>657</i>				
<i>658</i>				
<i>659</i>				

LAB INSTRUCTIONS: Laboratory reports should reference and be billed by site ID# and contain the following:

- summary of analytical methodology and QA work (blanks, spikes, duplicates)
- dates for (a) sampling, (b) lab receipt, (c) extraction, (d) injection/analysis
- detection limits for all constituents analyzed for and reporting of all constituents detected which were not specifically designated

# CHAIN OF CUSTODY RECORD

SAMPLERS: (Signature)

Mark Ehl

Phone: \_\_\_\_\_

SHIP TO:

Brown & Caldwell  
373 S Fair Oaks  
Pasadena CA

ATTENTION: \_\_\_\_\_

Phone No. \_\_\_\_\_

## SHIPPING INFORMATION

Shipper J. H. Kleinfelder & Assoc  
Address 901 W Victoria Compton  
Date Shipped 7-11-86  
Shipment Service AEC  
Airbill No. \_\_\_\_\_  
Cooler No. \_\_\_\_\_

Relinquished by: (Signature) <u>Mark Ehl</u>	Received by: (Signature)	Date/Time
Relinquished by: (Signature) <u>D. R. Anderson</u>	Received by: (Signature) <u>Erin McLae</u>	Date/Time <u>7/11/86 4:45A</u>
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Receive for laboratory by: (Signature)	Date/Time

\*Analysis laboratory should complete, "sample condition upon receipt", section below, sign and return original (white) copy to J. H. KLEINFELDER & ASSOCIATES, 901 W. Victoria Street, Suite G, Compton, CA 90220.

Sample Number	Site Identification	Date Sampled	Analysis Requested	Sample Condition Upon Receipt
<u>W-09-660</u>	<u>Q1014-3</u>	<u>7-10-86</u>	<u>metals</u> { <u>chromium (Total &amp; Hex), Cadmium, Copper</u>	
<u>W-4A-661</u>			<u>zinc chloride</u>	
<u>W-4A-662</u>			<u>EPA method 624</u>	
<u>663 Dup</u>				
<u>664</u>			<u>TOC (Biomass)</u>	
<u>665</u>				
<u>666</u>				
<u>667</u>				
<u>668</u>			<u>TOX</u>	
<u>669</u>				
<u>670</u>				
<u>671</u>				
<u>672</u>			<u>nitrate (N &amp; NO<sub>3</sub>)</u>	

LAB INSTRUCTIONS: Laboratory reports should reference and be billed by site ID# and contain the following:

- summary of analytical methodology and QA work (blanks, spikes, duplicates)
- dates for (a) sampling, (b) lab receipt, (c) extraction, (d) injection/analysis
- detection limits for all constituents analyzed for and reporting of all constituents detected which were not specifically designated

**SAMPLERS:** *(Signature)*

SHIP TO:

Shipper J. H. Kleinfelder & Assoc

Address Gr 1 W. Victoria Campus

Date Shipped 7-11-86

Shipment Service BFC

Airbill No. \_\_\_\_\_

Cooler No. \_\_\_\_\_

Relinquished by: (Signature)

Received by: (Signature)

Date/Time

Relinquished by: (Signature)

Received by: (Signature)

Date/Time

Relinquished by: (Signature)

Received by: (Signature)

Date/Time

Relinquished by: (Signature)

Receive for laboratory by\*: (Signature)

Date/Time

**Sample  
Number**

### Site Identification

Date  
Sampled

**Analysis  
Requested**

**Sample Condition  
Upon Receipt**

W-4A 673

Q1014-3

7-16-86

pH Correl.

674

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✓-00 679

↓ ↓ 680rup

A single lowercase letter 'j' is written on a five-line musical staff. The letter starts with a small hook at the bottom line, goes straight up, crosses the middle line, and ends with a small loop at the top line.

Quint  
met  
1  
sam

Chromium (Total & HCr)  
Zinc Chloride  
EPA method 624

Cadaverine, upper

summary of analytical methodology and QA work (blanks, spikes, duplicates)

dates for (a) sampling, (b) lab receipt, (c) extraction, (d) injection/analysis

(3) detection limits for all constituents analyzed for and reporting of all constituents detected which were not specifically designated